

REMARKS

Claims 1-4 and 15-16 remain in the application. Claims 1 and 15 are independent claims.

Both independent claims have been amended to eliminate the reference to protein being derived from vegetable sources only. This will obviate the inconsistency noted by the Examiner.

Claim 15 has been amended to clarify that the blend of unroasted whole wheat flour, soy flour, non-fat dry milk and baking powder is separately prepared. Claim 16 has amended to eliminate the specified dimensions of the circular die.

As now presented, it is believed that the claims of the application are clearly allowable over the prior art.

The claims as previously presented were rejected on a combination of Prosise et al., Engleman et al. and Tanaka et al. The applicants respectfully disagree, however, with the Examiner's interpretation of these references. It is believed that the Examiner is reading far more into these references than in fact is disclosed therein. Additionally, it is believed that the various differences between the claimed subject matter and the prior art are significant and neither obvious nor derivable from routine experimentation.

It can be readily derived from the prior art of record, and also from publications being submitted herewith by the applicant (by separate Information Disclosure Statement), that very little is "obvious" in connection with the preparation of snack foods and similar products. In the primary reference, Prosise et al., there are 22 examples of products with different variations of formulation, and various making and baking procedures, with a wide variety of results reported. In a similar manner, in the applicant's own specification, a variety of examples are described and evaluated, many of which do not satisfy sought for objectives. All of this points to the fact that, where multiple ingredients are involved there can be multiple interactions, and a great deal of experimentation and testing is required to achieve a desired result. In this respect, §103 of the Patent Statutes specifically provides that "Patentability shall not be negated by the manner in which the invention was made."

The Prosise et al. reference has little true relevance to the applicant's invention, beyond the generalized fact that it deals with a protein-rich snack food product.

The Examiner notes that Prosise et al. teach the use of "flour" and then indicates that it would have been obvious to use "whole wheat flour", and further takes the position that the use of whole wheat flour would be equivalent to the claimed step of powdering the wheat kernels in a disc mill to provide whole wheat

flour capable of passing through a designated screen. In this respect, applicant is submitting herewith a publication derived from [http://www.thecookiedoctor.com/\[etc.\]](http://www.thecookiedoctor.com/[etc.])

It is noted on the underlined portion at page 3 of this document that commercial flour, whole wheat or otherwise, is typically available commercially in a narrow particle size range. The above referred to submitted publication (thecookiedoctor) also indicates that particle size is an important factor in snack food products. A similar conclusion is expressed at the bottom of page 663 of another article, submitted herewith, entitled "Effects of Solvent Retention Capacities...", where it states that "The results also indicated that after sucrose SRC, flour particle size was important predictor of cookie diameter, and therefore, it also was an important selection criteria for improving cookie quality of Chinese wheat genotypes". A further submitted article, (Abstract only) entitled "Effect of Wheat Bran Particle Size on Dough Rheological Properties" indicates that wheat bran particle size is an important parameter that affects the final product properties. Thus, it can be stated that one obtaining commercially available wheat flour, as proposed by the Examiner for Prosise et al., would not necessarily be able to select a particular particle size as "a matter of preference". More importantly, however, Prosise et al. (a) does not utilize whole wheat flour and (b) does not suggest an optimum particle size for such, and certainly does not suggest an optimum particle size for achieving the specific snack food product or snack food dough set forth in the applicant's claims.

Clearly, particle size of the flour and the thickness of the sheet produced are

not suggested by the prior art. It is clear, in view of the submitted articles among other things, that this is not an obvious optimization, particularly when the wheat flour is being mixed with other ingredients.

From the prior art it can readily be appreciated that achieving a desired end product having desired properties is a difficult thing, not an obvious one. In applicant's previous response, filed June 20, 2008, applicant pointed out the amended claims called for the use of unroasted whole wheat flour as a major ingredient, and pointed out that the resulting product according to the applicant's claims was significantly superior to a similar product made with roasted whole wheat flour. This superior result is not suggested in the art and is by no means obvious.

The Engleman et al. reference is cited for its showing of a baked product featuring a proteinaceous powder including, in one example, a sesame component. Engleman et al. merely contains the bare recital of the use of sesame powder. The applicant's claims do not deal simply with the use of a sesame component, and particularly not with a sesame powder proposed by Engleman et al. Rather, the applicant's claims call for sesame seed paste from roasted sesame seeds. Moreover, the claims call for a portion of the sesame component to be in the form of roasted sesame seeds. In Engleman et al., the sesame powder component (formula "D") is 12.8% of the mix. In the applicant's product, the sesame seed paste is a much smaller portion (1.2 – 2.02%), with the added content of 0.61 – 1.51% of

sesame seed. Applicant points out that its claims are not directed to simply adding some amount of sesame in some form, but, for the applicant's specific product, the claim calls for the addition of specific amounts of sesame paste and sesame seed. There is no rational way that the characteristics of the applicant's sesame (i.e., paste and seeds) can be derived from Engleman et al., who describes the sesame as being in powder form. Nor do the relative amounts of sesame component compare even remotely.

The currently submitted abstracts entitled "Effective Roasting Conditions on the Food Quality of Sesame Seeds" and "Roasting Effects on Fatty Acid Distributions...in sesame (*Sesamum indicum*) seeds" establish that roasting of the sesame seeds affects the fatty acid and carbohydrates of the seeds. Such changes affect the dough properties and also the quality of the final product.

The applicant also refers to the currently submitted abstract "Effect of Grinding Time on the Texture and Physical Properties of Sesame Seeds". The grinding results in the extrusion of oil from the sesame seeds to form an oily, soft, smooth paste. There is no similar extrusion of oil where sesame powder is used, as in Engleman et al. This oil helps to improve the dough properties and also contributes to the sheeting of the dough to desired thicknesses. A similar result is the case with use of peanut paste, called for in applicant's independent claims.

Engleman et al. clearly disclose that sesame in some form and some amount can be incorporated in a high protein product. But beyond that, it contains no teaching relevant to the applicant's product and method as specified in claims 2 and 15.

The Tanaka et al. reference, cited for which showing of the use of roasted soy bean flakes (a) does not disclose either the form or the purpose of the soy component of the applicant's claimed product and (b) is actually quite contrary to the substance of the applicant's claimed invention. Tanaka et al. discloses the making of toasted soy bean flakes in a toaster/dryer, with the resulting product being the toasted flakes. These flakes are "particularly useful in hot and cold cereal compositions including with rolled oats, in soy bean flakes-potato compositions for making soy protein enriched mashed potato products, in granola and power bar-type food compositions, in shake and bake type compositions, in hot beverage mix compositions similar to malted milk mixes, and in meat analog veggie burger type compositions". (Column 5, lines 40-46). These products, including the granola and power bar compositions, are altogether unrelated to the specific snack food product of applicant's claims.

Importantly, the soy composition of applicant's claims is "roasted defatted soy flour". The soy flour is roasted at 200 – 220° C for a period of 5 – 12 minutes, as set forth in claim 2. Tanaka et al. not only deal with soy flakes, but also state

specifically (column 6, line 63; column 7, line 3) that “Transforming the soy beans or soy material into small granules or specialty powders dramatically and adversely increases the surface area of the soy bean material exposed to oxygen and moisture, and the temperatures to which the soy bean material is subjected. This exposure and unnecessary heating result in degradation of the soy bean material including development of undesirable flavors and denaturing of soy proteins”. (emphasis added). Thus, the processing of the soy flour in applicant’s product is specifically contrary to that taught by Tanaka et al.”

Tanaka et al. states (column 11, lines 28-31) that “The toasting time was maintained such that substantial reduction or elimination of the beany or off-flavors occurred, but without an[y] significant denaturing of the soy protein. This time is generally between 3 and 5 minutes”. In the applicant’s claimed procedure, in claim 2, it is specified that the soy component (in the form of flour – not flakes) is roasted for a period of 5 – 12 minutes, the lowermost limit of which is at the uppermost limit of the range specified by Tanaka et al. It is thus submitted that the Tanaka et al. reference cannot fairly be used as a source reference for the particular use of soy flour processed as claimed and incorporated in specific percentage amounts in the applicant’s snack food product. Essentially, the only thing in common between Tanaka et al. and the applicant’s claimed product/process is that each incorporates a soy component. That is not nearly enough, in the applicant’s opinion, to provide a basis for rejection of applicant’s claims, especially when the Tanaka et al. product

would be completely unsuitable in the applicant's snack food mixture.

The currently submitted abstract "Denaturation of Plant Proteins..." indicates that the relation between pH, temperature and rate of denaturation of soy proteins is complex, and optimum heat treatment of soy flakes, for example, inactivates nearly all biologically active components while the protein retains most of its functionality. It is thus evident that appropriate roasting time and temperature is not simply a matter of routine experimentation. On the contrary, it is an important parameter which affects the dough and the final properties of the product produced.

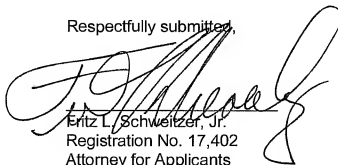
The roasting temperature and time that are specified for the soy flour component of the applicant's snack food mix is specific to the present invention and an inventive step, inasmuch as the soy flour is being mixed with other ingredients to achieve the ultimate product. These parameters are not disclosed or suggested by Tanaka et al.

The three prior art references applied against the applicant's claims relate to (1) a high protein snack food (Prosis et al.), (2) use of sesame powder in a snack food product (Engleman et al.), and (3) the toasting of full fatted soy flakes to reduce beany or off-flavors. Beyond that, the references show nothing that is specific to the specifically claimed product set forth in applicant's claims. Although the Examiner has indicated that nearly everything else is "obvious", the applicant respectfully submits that there is too much "distance" between what is shown in the prior art and

what is claimed for the differences to be obvious. In the most recent office action, the words "it would have been obvious..." appear no less than sixteen times (not counting an additional reference related to vegetable proteins, which are no longer in the claims). It is respectfully submitted that the prior art itself points to the fact that these things are not "obvious", certainly not to the extent suggested by the Examiner.

The applicant's claims as presented herein are highly specific to applicant's product, and the claims distinguish in many specific ways from the prior art. Thus, it is believed that the applicant's invention, as now set forth in the amended claims presented herein, is properly allowable over the prior art of record, and the Examiner's favorable reconsideration and allowance is solicited.

Respectfully submitted,



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